# Ice Dome

Completed Technology Project (2015 - 2016)

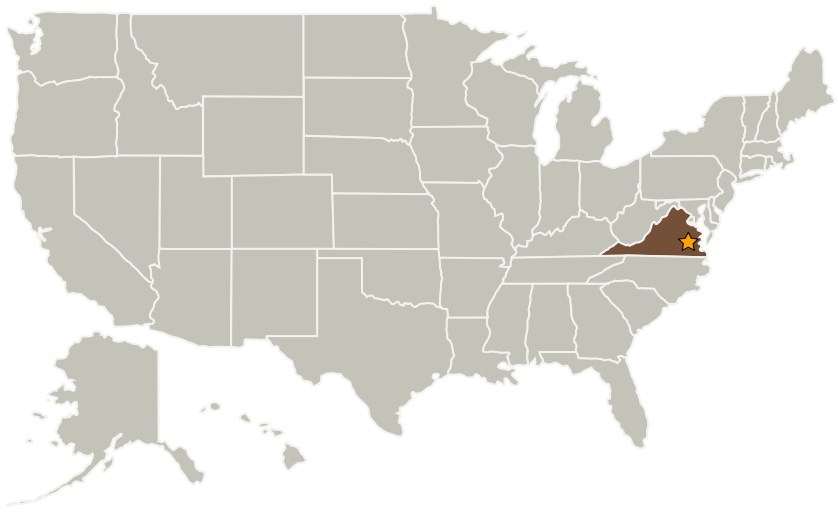
## Project Introduction

A Design Study will be performed to assess the various design options, technical risks and cost effectiveness of this shelter concept. Also, detailed cost estimates will be developed for a subscale test article to demonstrate an ice dome/vault deployment. The study would produce an Ice Dome design concept and an Ice Dome Concept of Operations. The study would identify the primary technical risks, identify technology readiness and identify the external skillsets needed to build a subscale demonstrator for deployment studies. This study would also provide estimated cost and schedule as well as projected technical resources such as the size and mass of the inflatable structure that would be delivered to Mars.

## Anticipated Benefits

This is help enable long duration human exploration.

## Primary U.S. Work Locations and Key Partners



| Organizations Performing Work | Role | Type | Location |
|---|---|---|---|
| ★Langley Research Center(LaRC) | Lead Organization | NASA Center | Hampton, Virginia |


Ice Dome

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## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Center / Facility:**

Langley Research Center (LaRC)

**Responsible Program:**

Center Innovation Fund: LaRC CIF

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| Primary U.S. Work Locations |
| --- |
| Virginia |

### Project Website:

https://www.nasa.gov/directorates/spacetech/home/index.html

## Project Management

**Program Director:**

Michael R Lapointe

**Program Manager:**

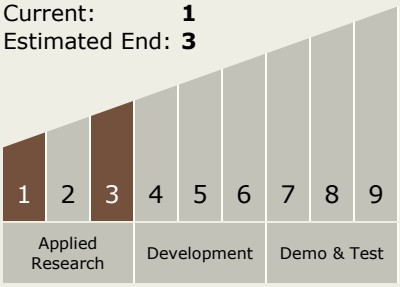
Julie A Williams-byrd

**Principal Investigator:**

Kevin S Kempton

## Technology Maturity (TRL)

Start: **1**
Current: **1**
Estimated End: **3**




## Technology Areas

**Primary:**

- TX13 Ground, Test, and Surface Systems
  - TX13.4 Mission Success Technologies
    - TX13.4.6 Ground Analogs for Space/Surface Systems